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EXAMINER	
YUEN, KAN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,139	BLOEBAUM, LELAND SCOTT	
	Examiner	Art Unit	
	Kan Yuen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/18/2004, 4/21/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8-13, 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, line 5, the term "at about" is considered as vague and indefinite, because the term failed to show if a packet is received exactly at the frame time or not. Similar problem exist in claims 9, 20, 21.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 14, 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Chow (Pat No.: 6571291).

In claim 14, Chow disclosed the method of receiving a packet including a header and a payload, the header including a header error check (HEC) computed based on

the header (see column 4 lines 28-45, and see fig. 2). The packet includes IP checksum 37 is extracted from the IP header 35. The checksum 37 can be considered as the HEC; calculating an error indicator based on the received header (see column 4, lines 5-30, and see fig. 3). The packet classifier module 24 compares or calculates the incoming data packet header with a plurality of templates or rules; forwarding the received payload if the calculated error indicator indicates an error free header (see column 4, lines 40-55). If the packet is determined to be valid or no error found, the packet is forwarded to status word 52, otherwise, the packet will be dropped; modifying the header based on an error correction table when the calculated error indicator corresponds to a value in the error correction table and forwarding the received payload (see column 2, lines 5-25, see column 4, lines 60-67, and see column 5, lines 1-25). The de-queue block 44 modifies the time to live fields of the IP header 35 and updates the IP checksum stored in the table or memory 28. The system arranges and provides validation and an incremental update of the IP checksum in real-time, and ther1efore we can interpret that the system is in synchronous mode; and detecting a received packet error when the calculated error indicator indicates an error in the header and the calculated error indicator does not correspond to a value in the error correction table (see column 4, lines 40-55). The IP parser 50 checks the content of the IP header 35 for 16 bits all equal to 1, it not, the packet will be considered as error and will be dropped. We can interpret that the values of 16 bits are stored in table for packet check.

Regarding claim 25, Chow disclosed the method of means for receiving a packet including a header and a payload, the header including a header error check (HEC)

computed based on the header (see column 4 lines 28-45, and see fig. 2). The packet includes IP checksum 37 is extracted from the IP header 35. The checksum 37 can be considered as the HEC; means for calculating an error indicator based on the received header (see column 4, lines 5-30, and see fig. 3). The packet classifier module 24 compares or calculates the incoming data packet header with a plurality of templates or rules; means for forwarding the received payload if the calculated error indicator indicates an error free header (see column 4, lines 40-55). If the packet is determined to be valid or no error found, the packet is forwarded to status word 52, otherwise, the packet will be dropped; means for modifying the header based on an error correction table when the calculated error indicator corresponds to a value in the error correction table and forwarding the received payload (see column 2, lines 5-25, see column 4, lines 60-67, and see column 5, lines 1-25). The de-queue block 44 modifies the time to live fields of the IP header 35 and updates the IP checksum stored in the table or memory 28. The system arranges and provides validation and an incremental update of the IP checksum in real-time, and therefore we can interpret that the system is in synchronous mode; and means for detecting a received packet error when the calculated error indicator indicates an error in the header and the calculated error indicator does not correspond to a value in the error correction table (see column 4, lines 40-55). The IP parser 50 checks the content of the IP header 35 for 16 bits all equal to 1, it not, the packet will be considered as error and will be dropped. We can interpret that the values of 16 bits are stored in table for packet check.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-3, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (Pat No.: 6571291), in view of Park (Pat No.: 6970436).

For claim 1, Chow disclosed the method of receiving a packet including a header and a payload, the header including a header error check (HEC) computed based on the header (see column 4 lines 28-45, and see fig. 2). The packet includes IP checksum 37 is extracted from the IP header 35. The checksum 37 can be considered as the HEC; calculating an error indicator based on the received header (see column 4, lines 5-30, and see fig. 3). The packet classifier module 24 compares or calculates the incoming data packet header with a plurality of templates or rules; forwarding the received payload if the calculated error indicator indicates an error free header (see

column 4, lines 40-55). If the packet is determined to be valid or no error found, the packet is forwarded to status word 52, otherwise, the packet will be dropped; modifying the header, only in the synchronous communication mode, based on an error correction table when the calculated error indicator corresponds to a value in the error correction table and forwarding the received payload (see column 2, lines 5-25, see column 4, lines 60-67, and see column 5, lines 1-25). The de-queue block 44 modifies the time to live fields of the IP header 35 and updates the IP checksum stored in the table or memory 28. The system arranges and provides validation and an incremental update of the IP checksum in real-time, and therefore we can interpret that the system is in synchronous mode; detecting a received packet error in the synchronous communication mode when the calculated error indicator indicates an error in the header and the calculated error indicator does not correspond to a value in the error correction table (see column 4, lines 40-55). The IP parser 50 checks the content of the IP header 35 for 16 bits all equal to 1, it not, the packet will be considered as error and will be dropped. We can interpret that the values of 16 bits are stored in table for packet check. However, Chow did not disclose the method of detecting a received packet error in the asynchronous communication mode when the calculated error indicates an error in the header. Park from the same or similar fields of endeavor teaches the method of detecting a received packet error in the asynchronous communication mode when the calculated error indicates an error in the header (see column 2, lines 52-67). The receive interface part counting or detecting the number error occurrence by check header errors of the cells in the asynchronous mode. Thus, it would have been obvious

to the person of ordinary skill in the art at the time of the invention to use the method as taught by Park in the network of Chow. The motivation for using the method as taught by Park in the network of Chow being that the system is capable of provide reliability in both real-time and non-real time network.

Regarding claim 2, Chow disclosed the method of the error indicator comprises a remainder value (see column 4, lines 40-55). The checksum comprises of 16-bits to calculate the error of a packet. We can consider the 16-bits is a remainder value.

Regarding claim 3, Chow disclosed the method of the header includes n data bits and wherein the error correction table comprises an n-entry table, each of the entries corresponding to an error in an associated one of the data bits (see column 4, lines 40-55). The checksum and data packet head, both comprise of 16-bits. We can consider each entry bit represents a table entry.

Regarding claim 15, Chow disclosed the method of a receiver configured to receive a packet including a header and a payload, the header including a header error check (HEC) computed based on the header (see column 4, lines 28-45, and see fig. 2). The packet includes IP checksum 37 is extracted from the IP header 35. The checksum 37 can be considered as the HEC; an error detect circuit configured to calculate an error indicator based on the received header (see column 4, lines 5-30, and see fig. 3). The packet classifier module 24 compares or calculates the incoming data packet header with a plurality of templates or rules; an error correction circuit configured to modify the header based on an error correction table when the calculated error indicator corresponds to a value in the error correction table, the error correction circuit

being configured to modify the header only in the synchronous communication mode (see column 2, lines 5-25, and see column 5, lines 1-25). The de-queue block 44 modifies the time to live fields of the IP header 35 and updates the IP checksum stored in the table or memory 28. The system arranges and provides validation and an incremental update of the IP checksum in real-time, and therefore we can interpret that the system is in synchronous mode; and a payload processing circuit configured to forward the received payload when the calculated error indicator indicates an error free header and/or when the error correction circuit modifies the header and to detect a received packet error when the calculated error indicator indicates an error in the header and the calculated error indicator does not correspond to a value in the error correction table in the synchronous communication mode (see column 4, lines 40-55). The IP parser 50 checks the content of the IP header 35 for 16 bits all equal to 1, it not, the packet will be considered as error and will be dropped. We can interpret that the values of 16 bits are stored in table for packet check. However, Chow did not disclosed the method of detect a received packet error in the asynchronous communication mode when the calculated error indicator indicates an error in the header. Park from the same or similar fields of endeavor teaches the method of detecting a received packet error in the asynchronous communication mode when the calculated error indicates an error in the header (see column 2, lines 52-67). The receive interface part counting or detecting the number error occurrence by check header errors of the cells in the asynchronous mode. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Park in the network of Chow. The

motivation for using the method as taught by Park in the network of Chow being that the system is capable of provide reliability in both real-time and non-real time network.

Regarding claim 16, Chow disclosed the method of the error indicator comprises a remainder value (see column 4, lines 40-55). The checksum comprises of 16-bits to calculate the error of a packet. We can consider the 16-bits is a remainder value.

Regarding claim 17, Chow disclosed the method of the header includes n data bits and wherein the error correction table comprises an n-entry table, each of the entries corresponding to an error in an associated one of the data bits (see column 4, lines 40-55). The checksum and data packet head, both comprise of 16-bits. We can consider each entry bit represents a table entry.

8. Claims 4-6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (Pat No.: 6571291), in view of Park (Pat No.: 6970436), as applied to claim 3 above, and further in view of Giaimo et al. (Pub No.: 2004/0090924).

For claims 4, and 18, Chow disclosed the method of discarding the received payload (see column 4, lines 40-55). However, Chow and Park did not disclose the method of a Bluetooth compliant network. Giaimo et al. from the same or similar fields of endeavor teaches the method of a Bluetooth compliant network (see paragraph 0047, lines 15-20). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Giaimo et al. in the network of Chow and Park. The motivation for using the method as taught by Giaimo et al. in the

network of Chow and Park being that the system is capable of provide service in wireless network.

Regarding claim 5, Chow disclosed the method of the header has an eighteen bit length and wherein the HEC comprises eight bits of the header (see column 4, lines 40-55). It obvious to change the 16-bits to eighteen bits, and to eight bits for the checksum.

Regarding claim 6, Chow disclosed the method of the received header comprises a repeat coded header (see column 4, lines 40-55). All 16 bits of the data header is to be 1, which is considered as repeat coded; and wherein receiving the packet includes demodulating the repeat coded header to provide the header including the HEC. After the IP parser 50 received the IP header, it checks the sum of the content of the IP header is 16 bits all-equal to 1, it not, it will demodulate the header by dropping the packet.

9. Claims 7, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (Pat No.: 6571291), in view of Park (Pat No.: 6970436), as applied to claim 1 above, and further in view of Kim et al. (Pub No.: 2004/0179521).

For claims 7 and 19, Chow disclosed the method of detecting a received packet error further comprises discarding the received payload and wherein the header further includes a destination device address (see column 3, lines 25-35); detecting a received packet error and discarding the received payload when the determined destination device address does not correspond to the expected destination device address (see

column 4, lines 29-55). The IP parser 50 checks the content or address of the IP header 35 is 16 bits all equal to 1. If yes, the data will be forwarded, if not, the data will be dropped. However, Chow and Park did not disclose the method of modifying the header comprises determining a destination device address based on the modified header and forwarding the received payload when the determined destination device address corresponds to an expected destination device address. Kim et al. from the same or similar fields of endeavor teaches the method of modifying the header comprises determining a destination device address based on the modified header and forwarding the received payload when the determined destination device address corresponds to an expected destination device address (see paragraph 0041, lines 1-8). The determined destination MAC address based on the OLT, which it changes the LLID prior to the data transmission. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kim et al. in the network of Chow and Park. The motivation for using the method as taught by Kim et al. in the network of Chow and Park being that the method reduces the transmission error rate.

10. Claims 8, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (Pat No.: 6571291), in view of Park (Pat No.: 6970436), as applied to claim 1 above, and further in view of Chrin et al. (Pat No.: 6628652).

For claims 8 and 20, Chow disclosed the method of modifying the header, only in the synchronous communication mode, comprises modifying the header only for synchronous communication mode received packets (see column 2, lines 5-25, see column 4, lines 60-67, and see column 5, lines 1-25). The de-queue block 44 modifies the time to live fields of the IP header 35 and updates the IP checksum stored in the table or memory 28. The system arranges and provides validation and an incremental update of the IP checksum in real-time, and therefore we can interpret that the system is in synchronous mode. However, Chow did not disclose the method of negotiating a synchronous connection-oriented (SCO) link to establish the synchronous communication mode; associating a frame time with the SCO link; and characterizing a packet received at about the frame time as a synchronous communication mode received packet. Chrin et al. from the same or similar fields of endeavor teaches the method of negotiating a synchronous connection-oriented (SCO) link to establish the synchronous communication mode; associating a frame time with the SCO link; and characterizing a packet received at about the frame time as a synchronous communication mode received packet (see column 15, lines 10-30). The system can provide different format of link at one end, and convert different into one unique format. One of the formats can be synchronous transfer mode. Since the synchronous mode is in real-time data transmission, the data must be established in synchronous transfer mode in accordance with time in a real-time link, or synchronous connection-orientated link. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Chrin et al. in the network of Chow

and Park. The motivation for using the method as taught by Chrin et al. in the network of Chow and Park being that the method provides real-time communication which improves the transmission accuracy in the system.

11. Claims 9, 10, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (Pat No.: 6571291), in view of Park (Pat No.: 6970436), and Chrin et al. (Pat No.: 6628652), as applied to claim 8 above, and further in view of Jeong et al. (Pat No.: 6389022).

For claims 9, 21 Chow disclosed the method of characterizing packets not received at about the frame time as asynchronous communication mode received packets (see column 2, lines 5-30). The received data can be high-priority real-time data or Internet packet, wherein Internet packet can be transmitted in asynchronous mode, and therefore the time slot associated with the received data is not a significant issue; discarding the received payload for asynchronous communication mode received packets having a destination device address not corresponding to the expected destination device address (see column 2, lines 5-30). The received data can be high-priority real-time data or Internet packet, wherein Internet packet can be transmitted in asynchronous mode. However, Chow, Park, and Chrin et al. did not disclose the method of forwarding the received payload comprises forwarding the received payload for asynchronous communication mode received packets having a destination device address corresponding to an expected destination device address. Jeong et al. from the

same or similar fields of endeavor teaches the method of forwarding the received payload comprises forwarding the received payload for asynchronous communication mode received packets having a destination device address corresponding to an expected destination device address (see column 8, lines 14-22). In ATM, the destination address corresponds to the destination call group address. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Jeong et al. in the network of Chow and Park and Chrin et al. The motivation for using the method as taught by Jeong et al. in the network of Chow and Park and Chrin et al. being that the method reduces the transmission error rate.

Regarding claims 10, 22 Chow disclosed the method of modifying the header comprises, for synchronous mode received packets, forwarding the received payload when the determined destination device address corresponds to the expected destination device address and detecting a received packet error and discarding the received payload when the determined destination device address does not correspond to the expected destination device address (see column 4, lines 40-55). The IP parser 50 check All 16 bits of address in the data header is to be 1. If the address is corresponding to the expected address, it will forward the data; otherwise the data will be dropped.

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chow (Pat No.: 6571291), in view of Park (Pat No.: 6970436), as applied to claim 15 above, and further in view of Tsutsumi et al. (Pub No.: 2003/0185186).

For claim 24, Chow and Park disclosed all the subject matter of the claimed invention with the exception of a mobile terminal. Tsutsumi et al. from the same or similar fields of endeavor teaches the method of a mobile terminal (see abstract, lines 1-15). The transmission is performed based on the header of the received data transmitted by the mobile terminal. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Tsutsumi et al. in the network of Chow and Park. The motivation for using the method as taught by Tsutsumi et al. in the network of Chow and Park being that the system is capable of provide service in wireless network.

Allowable Subject Matter

13. Claims 11-13, and 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art failed to teach the method of calculating the remainder value based on a generator polynomial and an initial value known to a device receiving a packet and a device transmitting the packet. (Orita see column 12, lines 38-55). The value is calculated based on parameters or polynomial and the total packet number whether or not the expected or known device

value is coincide with each other, as recited in claim 11, and estimating a bit error rate for the SCO link; and wherein the error correction circuit is configured to disable modifying the header when the estimated bit error rate fails to satisfy an error correction criterion, as recited in claim 23.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wada et al. (Pat No.: 7099256), Ishida et al. (Pat No.: 6839347), and Hata et al. (Pub No.: 2004/0181741), are show systems which considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kan Yuen whose telephone number is 571-270-2413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER